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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ADDIE, RAYMOND W

ART UNIT PAPER NUMBER

3671

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,341

Applicant(s)

BYRNE ET AL.

Examiner

Raymond W. Addie

Art Unit

3671



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/19/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the base (40) of the grip structures (32) having a continuous side wall that is also frusto-conical, as required in Claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites "said grip structures having a height (H)...a base having a...radius of curvature (RC) between the base and the top surface of the tread plate, wherein the ratio of the radius of curvature to the height of the grip structure is greater than 0.5".

It is indefinite as to how such a ratio is construed since no unit of measure is disclosed for either the radius of curvature or the height of the grip structure. Therefore, a ratio between the two features is indefinite.

Is the RC measured in degrees, minutes, seconds? Is the height measured in feet, inches or possibly centimeters or millimeters?

Claim Objections

3. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 9 recites "the base comprises a continuous side wall". However, Claim 1 also recites "a base having a continuous side wall". Hence, Claim 9 does not further limit Claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by

Mullaney et al.. # 3,181,440

Mullaney et al. discloses an anti-slip step (1) comprising:

A metal tread plate (10) with a top and bottom surface.

A plurality of grip structures (12), each having a continuous and curved base flange, as well as a plurality of spaced-apart tabs (16) joined to the base, each of said grip structures (12) at least partially defining a hole extending through the tread plate.

A plurality of drain holes (11, 14) extending through the tread plate.

Wherein said tabs of said grip structures are substantially angular in shape. See col. 2, ln. 37-col. 47.

In regards to Claims 2-4 Mullaney et al. discloses each drain structure (11, 14) further comprises: A plurality of spaced-apart tabs (16, 15) respectively, and that said drain structure tabs (15, 16) are joined to the tread plate (1) and the tabs are substantially angular in shape. See Figs, 1, 2; col. 4, lns. 41-54.

In regards to Claims 6, 7 Mullaney et al. discloses the grip structures are arranged in at least 2 rows, and the drain structures (11, 14) are arranged in at least 1 row. Such that the at least one row of drain structures is disposed between, and parallel to said at least 2 of said rows of grip structures (12). See Fig. 1.

In regards to Claims 8, 17 Mullaney et al. discloses each grip structure has a base that has a plurality of top ends, disposed between the tabs and the tabs have a plurality of top ends such that the top ends of the tabs have substantially the same length as the top ends of the base. See Fig. 1.

In regards to Claims 9, 10 Mullaney et al. discloses each of the grip structures (12) have a base that comprises a continuous side wall; and the tabs are frusto-conical in shape. See Fig. 3.

In regards to Claim 12 Mullaney et al. discloses the grip structures extend upwardly from a top surface of the tread plate. Mullaney et al. also illustrates, in Fig. 3, the base of the grip structures as having a radius of curvature of approximately 90° with respect to the top surface of the tread plate; as well as the grip structure having a uniform height, such as 1 unit of measure. Wherein the ratio of the radius of curvature to the height of the grip structure is greater than 0.5.

In regards to Claims 15, 16 Mullaney et al. illustrates the holes of the grip structures has a diameter and a height, such that the ratio of the height of the diameter (H/D) is less than 0.5. See Fig. 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bills et al. # 2,281,822 in view of Hasselquist # 1,959,101.

Bills et al. discloses a method of forming an anti-slip step comprising:

Providing a tread plate (1) having a top and bottom surface.

Bending a boundary region (6) of the tread plate so as to extend upwardly out of the plane of the tread plate.

Bending a boundary region (7) of the tread plate so as to extend downwardly out of the plane of the tread plate.

Forming a plurality of holes in the tread plate, such that the bent boundary regions form 1st and 2nd grip structures at least partially defining said holes.

Although Bills et al. discloses the boundary regions (6, 7) are punch formed, and that opposite side punching increases the transverse strength of the tread plate (1); Bills et

al. does not disclose whether the boundary regions are punched the same distance from the plane of the tread plate.

However, Hasselquist teaches a method for punching a metal plate such that embossments can be irregularly shaped, uniformly shaped and may be of different shapes. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the tread plate of Bills et al., with differently shaped embossments, in order to customize the load strength of the tread plate, as reasonably suggested by Bills et al. See Bills et al. cols. 2-3; Hasselquist col. 1, ln. 45-col. 3, ln. 16.

In regards to Claim 19, 21 Bills et al. discloses both upwardly and downwardly extending embossments (6, 7). Bills et al. further discloses the 1st and 2nd structures (6, 7) are arranged in alternating rows. See Figs. 2-6.

6. Claims 20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bills et al., # 2,281,822 in view of Hasselquist # 1,959,101 as applied to claims 19, 21 above, and further in view of Mullaney et al. # 3,181,440.

Bills et al. in view of Hasselquist discloses a method for forming a tread plate comprising upwardly and downwardly extending embossments (6, 7) each having spaced apart tabs defining a hole through said tread plate. But does not disclose

providing the tabs with continuous sidewalls. However, Mullaney et al. teaches it is desirable to provide tread plates having gripping tabs (16) with a continuous sidewall (12) in order to raise the tabs above the plane of the tread plate (1), a distance sufficient to promote self-cleaning. See col. 2, lns. 37-col. 3, ln. 2. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide method of forming a tread plate of Bills et al., in view of Hasselquist, with the method step of providing a continuous side wall to upwardly extending tabs, as taught by Mullaney et al., in order to promote self-cleaning of the tread plate.

7. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahnfleth # 4,343,119 in view of Mullaney et al. # 3,181,440.

Bahnfleth discloses a tread plate (10) with a top and bottom surface.

A plurality of grip structures (12) extending upwardly from the top surface of the tread plate (10) each grip structure (30) having a height.

A base (26) having a continuous side wall joined to the tread plate so as to form a radius of curvature (RC) between the base and the top surface of the tread plate.

Wherein a ratio of the radius of curvature to the height grip structure is less than 0.5; as illustrated in Figs. 1-3.

Although Bahnfleth discloses the base defines a drainage hole that is susceptible to clogging by dirt and debris, but does not disclose is the use of spaced-apart tabs joined to the base and extending upwardly therefrom.

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In regards to Claims 13, 14 Bahnfleth discloses in an alternative embodiment the side wall (36) of the grip structures can be frusto-conical in shape and the tabs (40) can be angular in shape. See Figs. 3, 4; col. 2.

Conclusion

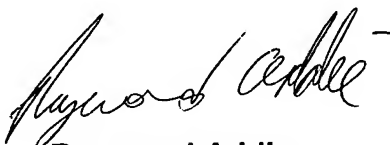
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pedersen # 3,943,589 discloses a gangway element having tread structures. Gibson et al. # 4,749,191 discloses an anti-slip step. Hill # 2,828,843 discloses a reticulated sheet. Klohn # 5,217,319 discloses a metal tactile edge-warning strip. Schmanski # 4,715,743 discloses a tread plate. McCarthy # 6,185,775 B1 discloses a tread plate for ramps. Schomaker et al. # 6,701,563 B2 discloses a folding ramp with tread features.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 703 305-0135. The examiner can normally be reached on 8-2, 6-8PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703 308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond Addie
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Group 3600

11/15/04